DOCUMENT RESUME

ED 401 275 SP 037 034

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TITLE Learning Organizations, Leadership, and Teacher Education: A Self Study of a Self Study in Three Takes.
PUB DATE 96
NOTE 25p.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Bilingual Education; *Classroom Techniques; Elementary Education; English (Second Language); *Extended Teacher Education Programs; Higher Education; *Interdisciplinary Approach; Portfolios (Background Materials); *Preservice Teacher Education; Second Language Instruction; *Teacher Collaboration; Teaching Methods
IDENTIFIERS *University of California Santa Barbara

ABSTRACT

This study describes the intellectual evolution resulting from persistent and careful consideration of beliefs and knowledge. Participants were prospective elementary school teachers enrolled in the University of California at Santa Barbara in a fifth-year post baccalaureate program. The study, parts of which began in 1990, sought to reconstruct the methods and procedures courses from separate classes of content specific pedagogy to integrated, integrating, and integrative experiences of teaching and learning within and between traditionally defined disciplines. To help analyze the individual and organizational supports and constraints of the change effort, the group used five disciplines: personal mastery, mental models, shared vision, team learning, and systems thinking. The group worked to understand many concepts, including portfolios, pro-active classroom management, how best to teach students not yet proficient in English, and sequenced and threaded integration and theme, while incorporating science and social studies into a teaching repertoire. Participants considered that they had discovered aspects of their work which they otherwise would not have known existed. (MAH)

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LEARNING ORGANIZATIONS, LEADERSHIP, AND TEACHER EDUCATION: A SELF STUDY OF A SELF STUDY IN THREE TAKES

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ED 401 275

Introduction

Learning to teach is action -- intellectual, physical, emotional, and psychological. Dewey (1933) made the distinction between routine action and reflective action. Routine action considers various means of reaching goals that are themselves unexamined. Reflective action is "persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads." This paper describes the intellectual evolution resulting from persistent and careful consideration of our own beliefs and knowledge. It continues to discuss how that evolution altered, and in some ways even became, the change we set out to study. Our research became a self study of a self study. We began by studying what we did. We are now studying what we think and believe which, as Dewey predicted, has made for greater change in what we do -- change more aligned with our values.

The programmatic context of the study was our own work with prospective elementary school teachers enrolled in the University of California at Santa Barbara. The elementary teacher education program at the University of California at Santa Barbara works with 45-50 candidates each year, with approximately 20% of those ultimately seeking bilingual certification either through course work or state examination. It is a fifth year, post baccalaureate program that also provides the option of receiving a Masters Degree in conjunction with professional preparation. The program begins with an intensive four week summer session in August. Student teaching begins on the first teacher duty day of the school year and continues through the last day of school in the Spring. Students complete their year long development of a teaching portfolio in the summer following completion of their student teaching and their course work.

The "object" of our study was the on-going reconstruction of the methods and procedures courses from separate and inviolable "class

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boxes" of content specific pedagogy to integrated, integrating, and integrative experiences of teaching and learning within and between traditionally defined disciplines. The initial conceptual rationale was, in the words of one of the participating instructors, four-fold: "It is how people learn. It is how the world works. It is what employees are looking for in our students. It is fun for us." As the change progressed, an additional rationale evolved: conceiving of teacher education in this way developed the ability of teachers to teach in ways that are both learner and learning centered. As Darling-Hammond (1994) notes,

> By this we mean to include the two dimensions of knowledge and practice that are central to the demands of current school reforms: (1) teachers' capacities to take into account and meet the needs of very diverse learners -- to teach in ways that are responsive to individual students' intelligences, talents, cultural and linguistic backgrounds, needs, and interests; and (2) teachers' capacities to teach for understanding -- that is, to teach in ways that support active, in-depth learning which results in powerful thinking and flexible, proficient performances on the part of their students.

The journey of change, upon which we are still embarked, is from a college class calendar with different subject specific methods and procedures courses taught on three late afternoons a week to a course labeled "Integrated Studies" taught across three afternoons a week.

First Takes -- The Substance of Change

In our first run through the data we tried to place the change in time, to establish a beginning and a chronology to our efforts. Establishing a beginning point for the evolution of human activities and social relationships proved a perilously arbitrary decision with enormous ramifications for subsequent understandings and actions. Still, with the confidence of two years of transcribed meetings and multiple interviews with faculty and students we traced the beginnings to shared experiences during the '90-91 academic year.

1990-91 -- Building the Foundation

In the fall term of 1990, all students were required to take methods and procedures courses in reading and in math. In the winter term of 1991, all students were required to take methods and procedures courses in social studies, science, and English as a Second Language (ESL). In the social studies course, the student teachers were developing and teaching lessons using specific teaching strategies presented in class such as concept attainment and formation, generalizations, and inquiry strategies. In the ESL course, the student teachers were developing, teaching, and evaluating lessons in which they had paid particular attention to sheltering their instruction for students whose primary language was other than English. In the science course, the student teachers were developing and teaching lessons aimed at providing hands-on, minds-on science experiences for students.

During the fall of 1990, a large sub-group of instructors and supervisors informally discovered a common interest in environmental issues. From this common interest, planning commenced for an early winter overnight Environmental Education Study Trip. This was perhaps the first instance of instructors and supervisors working together to plan, implement, and evaluate a shared activity. As a result, instructors and supervisors who previously *knew of* each other, now *knew* each other and that they shared some common values.

This experience began to develop the trust and respect necessary for successful collaborative change. For instance, after the trip, the instructors began attending each others' courses. In this way, program practices became visible and thus changeable. While instructors were becoming familiar with what other faculty were doing and students experiencing, they still planned their courses independently with little concern regarding how requirements between courses might be related or even if they were related. In addition, the Environmental Education Study Trip was placed in the calendar box labeled Science Methods and Procedures. The other instructors did not have to "give up" anything (e.g., content, instructional time) and because it did not effect the calendar of classes, it was not perceived as a programmatic change.

1991-92 -- Bridging the Content

While the methods and procedures courses remained separate entities the second year, the Environmental Study Trip expanded and more program faculty experienced collaborative planning of integrated learning activities and grew to know each other better. In addition, the science methods and procedures course required student teachers to submit an integrated science unit consisting of a five lesson sequence incorporating other discipline areas. Student teachers were to teach the unit to their students during their spring placements and then reflect upon them in a final paper. The other methods and procedures courses remained the same. Course evaluations indicated that a majority of student teachers found the integrated lessons assignment a valuable experience, but felt it was entirely too much work for a single course.

Based upon this feedback -- and a belief that integration was how the mind worked, the world worked, what employees were seeking, and was fun besides -- the science instructor and teaching assistant approached the other winter term methods and procedures instructors (social science and ESL) about the possibility of developing one integrated unit assignment to be used to meet some of the other course requirements. The other instructors supported the idea. This was not a great leap. As a result of observing each other's classes, instructors had already begun encouraging students to kill two (or more) assignments with one stone. Students could use science and social studies content for their ESL assignments on sheltered instruction and the social sciences instructor allowed students to teach "science content" as long as they used strategies from his course. Some of the more clever student teachers would plan, teach, and reflect upon a lesson using a strategy from social studies, sheltering techniques from ESL, and a concept from science and use the same lesson to meet requirements for all three classes. As they did so, the instructors began to see constructive intersections of their courses and their educational values.

Another factor in making educational values visible to each other was the search process and eventual hiring of a new director of teacher

education. In the act of coming to an agreement on who they wanted in the role of director, the program faculty had to come to a deeper and more public understanding of what their goals for the organization were and what kind of organization would best support those goals.

1992-93 -- Bridging the Assignments

In August of 1992, three of the four instructors approached the Director of Teacher Education in his first week on the job. Timidly, they asked if they could collapse the assignments for their three courses so that student teachers could plan, implement, and reflect upon one integrated unit that would satisfy some of the requirements for all three. Their tentativeness arose from a sense that this would entail a programmatic change -- they were not just talking the science course anymore -- and other major players (the coordinator, the supervisors) in the program would be affected. The new director was supportive and encouraged the group to forge ahead. In addition, he encouraged the group to view their efforts as a research project and to document their planning sessions. At their first meeting of the year, the director took notes and labeled them "Thematic Instruction Research Team." This was the first "research team" from within the teacher education program made up solely of TEP instructors. Unbeknownst to the new director, these seemingly innocuous words led to a sense among the instructors that indeed, "Things were going to be a bit different."

The first change was that what were once three disparate courses with individual and independent views about what was best for student teachers to know and be able to do became courses where instructors consciously and overtly assisted students in making connections among them. There was even an additional workshop at the beginning of the winter term to provide students with conceptual tools for thinking about integrated instruction (with the director's urging). The second major change was the construction of one final assignment for all three courses: a two-week integrated unit including a rationale, a conceptual map, a flexible block plan, and ten lesson plans. Of the ten lesson plans five had to cover science content, one had to use a strategy taught in the social studies class, and one had to analyze the lesson using criteria for

instruction designed to support the learning of students for whom English was a second language. Student teachers were also to teach the ten lessons in their field placements and turn in a final written evaluation of the unit assessing student learning as well as reflecting upon the process of designing and implementing an integrated unit.

The common assignment constituted a major programmatic breakthrough and the caliber of the student work pleased the instructors. They retained, however, a critical sense that they had "fizzled out towards the end." The courses were still taught separately; they had not linked as well as they would have liked with the supervisors and cooperating teachers; and they sensed something amiss when they broke apart the units for evaluation. Next year, they promised at their end-of-the-year meeting, they would break out of their calendar boxes.

1993-94 -- The Winter of Our Integration

By this time, UCSB was head over heels in the midst of creating a Cross-Cultural Language and Academic Development Program (CLAD). CLAD is a new teaching credential authorized by the state of California to better educate the over 1,000,000 students in California for whom English is a second language. In the midst of reviewing the program standards, the director realized that the on-going efforts to integrate the methods and procedures courses were also an excellent vehicle for assisting the development of specially designed academic instruction in English (a key component of the CLAD certificate). This was especially true because of the integration of the ESL course with the traditional academic disciplines of science and social studies.

In addition, as he came to understand better what all the instructional zeal was about, he realized the group would need a coordinator -- somebody who could schedule meetings and rooms, take notes, and smilingly deal with mounds of administrivia. He combined two teaching assistant positions (one that had always existed and one that had not) to fund the position. The combined funding created a salary slightly higher than an instructor's, so the group decided that the coordinator would both teach as an equal partner as well as coordinate. Aside from

the needed coordination provided by the new position, its establishment was perceived as institutional support in that the Graduate School of Education was taking an 8% cut that year and the instructors, because they now taught one section instead of two, had seen their salary for the work halved.

The three classes were now one -- the single required course during the winter term of the professional preparation year. The three instructors and the coordinator choreographed a pedagogical dance where each had a part in each class -- team teaching rather than parallel teaching. The integrated studies course consisted of four interlacing contents: (a) general pedagogy, (b) discipline specific pedagogy, (c) the disciplines themselves, and (d) philosophy. The ESL instructor, explaining the latter, wrote,

> I think this plays an important part in the scheme of things -- that we, as instructors of the traditional procedures classes, are 'in synch' with each other philosophically feels to be important when we consider integrating the curriculum. Our philosophy of how students best learn is apparent in the choices we make when we design and instruct our classes. There is a consistency of thought that is an underlying theme to our program, and this aspect should not be discounted.

The assignment remained basically the same as the previous year -- to create, implement, evaluate, and reflect upon an integrated unit. As the science instructor explained on the first day of class, "We re-evaluated what we did, and we felt good about it, but we realized, 'Wait a minute. Here we are teaching people to teach in an integrated way and we're not teaching an integrated course. So this year we decided to walk our talk and actually teach an integrated course." They were walking their talk and in the process transformed the college-based curriculum of the teacher education program.

Second Takes -- Using Senge to Understand the Form of Change

At this point in time, we began to feel uncomfortable with our analysis. It had focused on the *stuff* of the change -- the content, the

assignments, the teaching, and the schedule. Yet the more we lived the change, the more we realized it neither began nor centered on stuff. It began from within the "hearts and minds" of the instructors and the substance had continued to evolve from this deeper change. We wanted to understand the forms of the change (Capra, 1994). The study of form begins with questions of patterns -- specifically of changes in the relational patterns among and between the instructors, the student teachers, the institutional authorities, the cooperating teachers, the elementary students, and how they all viewed curriculum.

We decided to use the work of Peter Senge (1990) to help analyze the individual and organizational supports and constraints of the change effort. It is essential to make the distinction between using "Sengian thought" to support on-going analysis of a change effort versus its use as a conscious pre-structuring of a change effort. That is, we did not use Sengian thought to chart our course in advance, but rather to understand and shape an ongoing course of change. We had two reasons for using Senge in this way. First, he recognizes the importance of values and systems thinking in the change process (as do others, see for instance, Capra, 1994; Wheatley, 1994). Secondly, he is one of the better known of many organizational theorists who use business contexts to explore organizational issues. Our choice was not totally without reservation. In the headlong rush to translate business related findings to educational settings we believed a sympathetic, yet critical and grounded, look at the translation process would be useful. Thus, we began with the purpose of exploring the relevance of Sengian thought in understanding change efforts in the UCSB Teacher Education Program -- a public sector educational setting which begins with a different set of assumptions about the nature of the organization and where the "bottom line" is nebulously more ambivalent than in business settings.

Senge (1990) suggests five disciplines to explore the forms of organizations and organizational change. By discipline, he means, "A body of theory and technique that must be studied and mastered to be put into practice ... a developmental path for acquiring certain skills or competencies" (p. 10). His five disciplines are personal in nature. "Each

has to do with how we think, what we truly want, and how we interact and learn with one another" (p. 11). In our second run through the data, we explored the meaning of Senge's five disciplines (personal mastery, mental models, shared vision, team learning, and systems thinking) through providing examples from the change outlined above.

To understand this stage of our evolution it is necessary to take a brief side trip through a definition of Senge's five disciplines as well as to provide an example of the kinds of analysis to which this thought led us.

Personal mastery is the discipline of personal growth and learning. "People with high levels of personal mastery are continually expanding their ability to create the results in life they truly seek. From their quest for continual learning comes the spirit of the learning organization" (p. 141). Individuals with a well-developed personal mastery possess a solid set of centering convictions, a grounded sense of purpose, which drive their perpetual growth. Their personal inquisitiveness is a part of a larger creative process that is influenceable but not controllable. Such individuals never arrive, but rather live in a continual learning mode. Personal mastery, however, is not something one possesses, but rather a process. "It is a lifelong discipline. People with a high level of personal mastery are acutely aware of their ignorance, their incompetence ... And they are deeply self-confident. Paradoxical? Only for those who do not see that the journey is the reward" (p. 142). The inevitable tension between their centering convictions and the status quo propels the journey. The creative use of that tension requires the integration of reason and intuition, recognition of the connectedness of the world, compassion, and commitment to the whole.

While personal mastery is an "individual discipline," like all personal traits it is closely related to environmental factors (Lewin, 1951). An institution that supports personal mastery fosters a climate in which personal mastery can be practiced.

> This means building an organization where it is safe for people to create visions, where inquiry and commitment to the truth are the norm, and where challenging the status quo is expected. Such an organizational climate will strengthen personal mastery in two ways. First it will continually reinforce the idea that personal growth is truly valued. ... Second, it will provide an on the job training. ... Many of the practices most conducive to developing one's own personal mastery -- developing a more systemic world view, learning how to reflect on tacit assumptions, expressing one's vision and listening to others' visions, and joint inquiry into different people's views of current reality -- are embedded in the disciplines for building learning organizations. (171)

Mental models, comparable to what Argyris (1982) refers to as "theories-in-use," determine how one makes sense of the world and the actions one takes within that world. They are closely related to personal mastery as one's belief system and desire to learn continually is, in some ways, one key component of one's mental model. If the substance of change is to be sustained over the long haul, the mental models of those involved (the constructs which guide actions) must change. Senge identifies two important skills involved in the continual reconstruction of mental models: skills of reflection and skills of inquiry. "Skills of reflection concern slowing down our own thinking processes so that we can become more aware of how we form our mental models and the way they influence our actions. Inquiry skills concern how we operate in face-to-face interactions with others, especially in dealing with complex and conflictual issues" (p. 191). Reflection skills begin with recognizing leaps of abstraction -- assumptions calcified into fact. Inquiry skills begin with balancing inquiry and advocacy. The ideal state is reciprocal inquiry where each party in a discussion makes his/her thinking explicit and subject to public examination. While challenging, it is not easy to expose the limitations of one's own thinking, balancing inquiry and advocacy increases the possibility of collaborative learning and creative, productive outcomes.

A *shared vision* is not merely an idea, no matter how important the idea. It is rather a force from the heart of impressive power. When the

vision is shared, when it is compelling enough to acquire the support of another, then it is palpable. People act as if it exists.

> When people truly share a vision they are connected, bound together by a common aspiration. Personal visions derive their power from an individual's deep caring for the vision. Shared visions derive their power from a common caring. In fact, ... one of the reasons people seek to build shared visions is their desire to be connected in an important undertaking. (p. 206)

A shared vision is not the mission statement developed on high for public relations purposes but rather the centering convictions that drive an individual or a group to significant action. It is the ethical force that develops the attitude that "All that trouble seems trivial compared with the importance of what we are trying to create" (p. 209).

Building and using a shared vision in an organization is a time and labor intensive emotionally laden process. "Visions that are truly shared take time to emerge. They grow as a by-product of interactions of individual visions. Experience shows that visions that are genuinely shared require ongoing conversations where individuals not only feel free to express their dreams, but learn how to listen to each others' dreams. Out of this listening, new insights into what is possible gradually emerge" (p. 218). Thus, a shared vision requires an extraordinary openness to entertain a diversity of ideas. It does not, however, require sacrificing one's own vision for the sake of a larger cause. Multiple personal visions must co-exist such that as each person in the group listens (balancing advocacy and inquiry), a divergent unity emerges.

Team learning is the discipline through which mental models change and personal masteries meld into a shared vision. Building on personal mastery and shared vision, team learning helps team members find their alignment. Everyone *may* be on the same boat, committed to rowing, and excellent rowers -- team learning supports the emergence of everyone using their motivation and skill to row in complementary directions. Team learning requires expertise in both dialogue (free and creative exploration of complex and subtle issues) and discussion (presentation and

defense of one's own position). As team members balance dialogue and discussion constructive relationships develop among them:

> They develop a deep trust ... a richer understanding of the uniqueness of each person's point of view. Moreover, they experience how larger understandings emerge by holding one's own view 'gently.' They learn to master the art of holding a position, rather than be 'held by their positions.' (p. 248)

Another requirement of team learning is constructive conflict resolution. "The difference between great teams and mediocre teams lies in how they face conflict and deal with the defensiveness that invariably surrounds conflict. ... Teams stay stuck in their defensive routines only when they pretend that they don't have any defensive routines, that everything is all right, and that they can say anything" (pp. 249, 255). Conversely, it is not the absence of defensiveness that characterizes team learning, it is how defensiveness is faced. "A team committed to learning must be committed not only to telling the truth about what's going on 'out there,' ... but also about what's going on 'in here,' within the team itself. To see reality more clearly, we must also see our strategies for obscuring reality" (p. 257).

Systems thinking is "a conceptual framework to make the full patterns clearer and to help us see how to change them effectively" (p. 7). The essence of systems thinking lies in contemplating the whole rather than any individual part of a pattern of change. Senge develops a rich language to describe the vast array of interrelationships and patterns of change to help counteract the "pervasive reductionism in Western Culture -- the pursuit of simple answers to complex issues" (p. 185). The ultimate value of systems thinking is that it simplifies life by making visible the deeper patterns behind the flotsam and jetsam of the day-to-day.

Integrating the Disciplines

As the power to make sense of, and act productively within, the world increases as one integrates traditional academic disciplines, so too does one's ability to understand organizational change by integrating

Senge's five disciplines. The five disciplines, "form an ensemble of technologies that are critical to each other's successes." They must all be present and they must all be working together if the people within an organization are to learn and "continually enhance their capacity to realize their highest aspirations" (p. 6). The following conversation from a planning meeting during the fall of the fourth year exemplifies both the interconnectedness of the disciplines as well as the use of Sengian thought as a tool to analyze organizational change.

What Are We Going To Teach

In mid September of the fourth year of the change process, the four instructors, a supervisor of student teachers, and the coordinator of the elementary program gathered around a large conference table in the Graduate School of Education to determine just what this large series of blocks on the Winter calendar would be. For nearly two years the four instructors had been discussing such abstract issues as what was integrated studies? Was it in synch with what they knew about the development of student teachers? The discussions had resulted in an abstract agreement on what they were trying to do -- but not without respectfully intense disagreements which clarified mental models and promoted team learning.

On this day, such practical issues of just who was going to do what and when were first on everyone's agenda. The meeting began with everyone sharing the most critical aspects of their courses.

ESL: Total physical response ... and a whole bunch of two-way interactions.
Science: Total what? What is that?
ESL: Total Physical Response
Science: What is that?
ESL: It is an ESL strategy. It could be used in content also if you're introducing new equipment. Say, 'This is a tape recorder. Here is the scotch tape.' Touch the tape recorder. Give Ron the scotch tape. 'Who has the scotch tape, Ron or Sarah?' You know, so it's those kinds of things where it's how you teach vocabulary of the new

Science (interrupting): So, give me an example of what I might do in a science class. Would I say 'I'd like you to take this cell culture. I want you to make a slide that is magnified 100 times'

Social Studies (interrupting): No, no. I think you have to understand the historicity of the language acquisition because language has been taught by 'How do you spell this word' and 'Give me all of the cases of this word' and 'What is the generative case?' What (ESL) is saying is I am just going to tell you to do something in my language, and you do it.

Science: That's what I said ... That's exactly what I said. I said, 'Take this culture, make a slide, and do it under 100 times magnification.'

ESL: OK, that's a little more sophisticated.

Science: But I think it is the same idea.

ESL: This is even simpler. 'This is a cell culture.' Point to the culture. 'This is a microscope.' Point to the microscope.

Science: OK, let me see. You just said this to him, 'Give this tape recorder to Ron.' All I'm saying is 'Put the slide under your microscope.'

ESL: STOP. And they do it. That's it. ... Total Physical Response is the very first thing you do before the kids know the language. It's what moms do with tiny tiny babies. It's what I do with recent immigrants who just arrived from another language and culture. And it's what you might do in a science class to teach the vocabulary of the science equipment. You're not teaching science concepts yet. You're just teaching the science language. ...

Science: OK, I get it. I am going to say, 'Use your coarse knob.'

ESL: Right, 'Pick up your coarse knob. Show your coarse knob to your buddy.'

...

Coordinator: Are there other (strategies) ... you want to put up here?

ESL: Oh, Language Experience, which is a BIG approach rather than just a strategy.

Science: What is Language Experience Approach?

ESL: In science what you might do is -- Oh, the story of tongues is perfect. Sue was teaching the kids -- they were reading <u>The Trumpet and the Swan</u> and they were talking about what you have to do to make the trumpet make the noise. So they were talking about the mouth and the mouth parts. In science, they were doing taste, tasting different

things and where the different taste buds are. In the language part of the day, the kids dictated 'The Story of Tongues.' They each told why they thought tongues were important. Tongues are a muscle, tongues help you taste, tongues help you talk, tongues are very important to live your life. And so they created the text based on experiences and based upon their understandings ...

Science: What is the rationale behind that strategy?

ESL: It does several things. One is that it makes a tighter connection between the students' own language and written text. They don't always see there is a connection between spoken language and written text, especially if they are coming from a pre-literate culture. Second, it makes for a highly relevant text. They care about it because it is their language.

The ESL instructor has a strong desire to teach the other members of the group about the strategies she teaches. These are, perhaps, the physical embodiments of the soul of her personal mastery. They are not merely "pedagogical tools" for her, but a piece of the vision she has for the education of students from diverse language backgrounds -- an essential element of the content of teacher education. A second motivation is the value of the integrated studies course to move ESL onto the field with "the real subjects of science and social studies." It is probably not coincidental that the ESL instructor, with perhaps the strongest sense of personal mastery, was the central, though not the only, force leading the group into team learning and shared vision. The stronger the personal mastery of the members of the group, the greater the possibilities for team learning and shared vision.

The science instructor forces the ESL instructor to a clearer articulation of what she does and why. The science instructor felt neither stupid nor mean in asking, again and again, what do you mean? This form of conversation, characterized by both inquiry and advocacy, changed the way both saw the interrelationship between the ESL strategies, the teaching of science, and the strengths, interests, and needs of English language learners -- a change in their mental models. A shared vision emerged from their changed mental models. The use of ESL strategies in a

content area was becoming a theme of the course (and of the program) through both personal vision and a development of a shared mental model. Still operating from their personal strengths and not losing anything, what became palpable that day was the potential of merging those strengths for the benefit of limited English proficient students -- students traditionally excluded from access to content knowledge. There was no way the science instructor was going to let go of content, to sacrifice microscope cells at the altar of integration. (In the year following this conversation, Integrated Studies increased the amount of content specific pedagogy aspects of the course.) The newly emerging shared vision combined learner centered issues (e.g., the ESL instructor's passion to consider the student) and learning centered issues (e.g., the science instructor's passion about the power of science).

The group was practicing the discipline of team learning through dialogue where different views are presented as a means toward discovering a new view rather than a "discussion" where different views are presented and defended (Senge, 1990). Their dialogue aligned the group to where they were beginning to row in the same direction. The group dealt with inquiry as an opportunity to learn rather than as a threat. They knew that each participant genuinely wanted to learn. The consequence was an overcoming of defensiveness and an openness that allowed team members to actually learn from and with each other.

Interestingly, the fifth discipline, systems thinking, was less clearly evident than the first four. The group, at this point, was not creating frameworks for understanding inter-relationships. They were still viewing courses as individual components of the program and were attempting to identify the substance of what they taught so that it would be included in the new course. They described their strategies as "snapshots of the curriculum." It was not until they were actually pedagogically dancing with each other that they began to discover patterns underlying the surface of the snapshots.

Third Take -- Leadership and an Educational Learning Organization

Though our two runs through the data had provided us with much information and perhaps a little wisdom, we were still unhappy. Our unhappiness stemmed primarily from the fact the course was not getting the results we desired. Students were not giving it rave reviews, cooperating teachers complained, and it was causing tensions among those "of the course" and those not "of the course." (For instance, even our internal name for the course was DRAB -- taken from the first initials of the participating instructors.) As we once again went through the data we discovered that we had begun shaping the course using our understandings of Sengian thoughts and this shaping was leading us in a direction away from our ultimate goal of helping our students become learner and learning-centered teachers.

We found two elements of our use of Sengian thought to understand organizational change within teacher education to be factors in our misdirection. First, though it speaks of "learning organizations," its approach led us to view change more as the result of individual psychological traits and did not allow us to understand the group and sociological elements of change. The second was that its business origins led us to the use of an inappropriate metaphor for an educational organization. That is, we were the organization and our students were the clients.

Our thinking and acting about leadership provides a grounded example of how our thoughts shaped our actions and how those actions, in turn, led us away from enacting our own beliefs. During our first take, the authors of this paper (as well as a majority of the participants) located leadership issues within the role of institutional decision makers and conceived of them basically as character traits (or defects) of the Director of Teacher Education. The narrative analysis went something like this:

- The new director enters the scene and gives his permission to a change effort fundamentally because he saw people passionate about an idea which was morally and intellectually consistent with his notions of the

education of teachers;

- The new director then gives status to the effort by treating it as research;
- The director shuffles roles and budget to create a coordinator's role.
- The director, learning more about and from the key players links the Integrated Studies Project with the development of a new credential program thereby linking the project to values and purposes beyond methods and procedures courses at a teacher education institution;
- The director shows up at team meetings and class sessions and demonstrates that he too is a learner seeking understanding, sharing his own commitment to truth, and in the process opening to public scrutiny the inconsistencies of his own thinking;
- When issues of exclusion and special status arise concerning the effort, the director, formally and informally, supports the project with honesty and patience (this is where we have come -- this is how far we have to go).

Taken together, these actions by the director exemplify the Sengian leadership roles of designer (creating an environment where the work can be done and integrating the components); steward (imbuing the work with a deeper sense of purpose); teacher (facilitating an empowering view of reality as a creative not a constraining force); and maintaining a creative tension (keeping the vision *and* the current reality in focus).

This conceptualization is basically individualistic and traditional in locating leadership in the hands of individuals in administrative roles -- and then analyzing it in terms of personal characteristics rather than organizational environments. During our second take, we came to deeper appreciation of the change process in a teacher education organization, and discovered our own thinking was both limited and limiting. In retrospect, our limits were partially a product of our own history in traditional post-secondary institutions as well as the focus Senge places on the personal nature of the disciplines and his emphasis on CEO's in his notion of leadership. What we have learned is that in an educational learning organization the kinds of "directorial" actions described above are nowhere near sufficient for significant change and, while supportive,

may not even reach the status of necessary. The essential leaders in the change effort were the instructors and supervisors creating the work. If, as Senge notes, people learn what they need to learn, not what someone else thinks they need to learn, then the learner must be the leader.

While it took the authors as learners several years to suddenly reach this understanding of leadership, the participants grew slowly to an intuitive understanding over time. Compare, for instance, their initial trepidation in approaching the new director for permission -- permission primarily to think about their work with students in a manner outside the historical experience of the program. By the second year, they no longer asked permission, but were taking every opportunity to teach the director (as much out of their enthusiasm with the possibilities as with a political desire to curry favor). Currently, the science instructor (still conceiving of herself as an instructor -- not an administrator) is the administrative coordinator of expanding the integration across the entire professional preparation year to include all the subject matter methods and procedures course, the field placement supervisors, and the psychological and social foundations courses. The ESL instructor is leading the professional development workshops for teacher educators on issues related to cross-cultural language and academic development. In these ways, the instructors became the leaders of the change effort -- designing, stewarding, and teaching towards an educational learning organization where all the faculty are leaders.

In this stage of our thinking and acting, teacher educators, even if no longer the hierarchical "head" of a program, held center stage. We were the organization providing service to student clients. As the holders of center stage, we were "in it" as much for ourselves as for anyone else. One participating instructor wrote of a force propelling her that was less something she wanted for students than something she was receiving from other instructors:

> How can I begin to describe the deep respect I feel for my fellow collaborators? The way I am motivated to do the best I can? To uphold their respect? To be a worthwhile, fully

functioning part of the team. This is the kind of teaching experience I have longed for -- to be a member of a team that is committed to giving all that we can to provide our students with the best possible experiences.

Another example comes from the first day of the integrated studies course during year four which began with the instructors describing *their* work in creating the course:

> When (the director) came to ... us this year and told us he would like us to take this project into the next phase, each of us said, 'Whom do I have to work with?' Right? Because we had worked so closely together over the last few years and have so much collegial respect for each other, that ended up being what we recognized as one of the critical pieces for this project to be where it is today. So, collegiality is certainly one of the themes we're going to encourage because the whole notion of transformation and change can't be done alone and it really has taken us together, with each other, to move, to shift from old ways of thinking about curriculum over to ways we're thinking about curriculum now.
>
> A second theme (emerged when) we sat down and looked at all the teaching strategies or processes that each of us, independently, had been teaching in our courses, and recognized that there was a lot of overlap. ... What we recognized is that it would be much more effective to look at the teaching strategies together and to offer to you our different perspectives on any teaching strategy.
>
> The third theme is content. I am a 'content convert.' I used to put all of my focus on processes. (I figured) it didn't matter what the content was. If I knew the teaching processes, I could teach anything. I now have tremendous respect for the importance of content knowledge. And so what we've been able to do is pull together our content expertise. We've shared it with each other. I now stand before you and say, 'I actually taught science lessons in front of people,' which is something I had not done before because I was terrified with the content. ...
>
> The fourth theme is reflectivity. I really don't think that any of the four of us could have gotten where we are in our

> understandings of integrated instruction had we done it alone and had we done it without reading a lot of the journals. (The science instructor) has been wonderful going to the library and bringing us cartloads of books and journals to read. And we've read them and talked about them, thought about them. We've also videotaped ... and audiotaped a lot of our meetings to get a sense of what it is we're discussing. And we've written in our journals. ... The reflection that we've done has allowed us to be in a place where we're doing something that is not being done anywhere else.

There are 37 "I, we, and our's" referring to the four instructors and one reference to students. The instructors were the organization and it was as if the content of the course was *their* learning. Students, in some ways, had an uncertain role in the work. It was as if they were not actually "of" the organization.

In our third take, program faculty have come to a different and much clearer sense of organizational roles. First, students are no longer ambiguously situated somewhere between clients for faculty knowledge and products of faculty work to be bought by districts. Rather they are members of the organization. In line with the constructivist rhetoric we have always used, education has become less done to students, and more drawn from them. With this in place, leadership no longer belongs in an administrative box. Nor is it even just the rightful role and responsibility of all faculty. Rather, if students are members of the learning organization rather than the clients of that organization, then the goal is the creation of a leadership organization -- one where student teachers develop, over the course of their work during professional preparation, as leaders, not just in their classrooms, but leaders in changing schools into the learning organizations they are capable of becoming and children and their families deserve and require.

For example, in the past two years, rather than instructors explaining their sense of integrated instruction using instructor designed active learning experiences, one day each week is set aside for "studio time." In studio time, students bring *their* work and instructors are

present to bring their expertise to the creative work of the students. Studio time is one enactment of the inquiry model where student strengths, interests, and needs determine the curriculum. The change in thinking is perhaps nowhere more evident than in the opening of the first day of the class. In earlier years it began with the 37 references to the instructors. The past two years it began with the reading of the following letter -- where the "we" consciously includes students as members with leadership roles in an organization of learning.

TO: Our Students
FR: Bridget, Ron, Sabrina, Ann, Richie, and Sarah
RE: Our Journey Together

There are tourists and there are travelers. The distinction, as proposed by the vacation industry is that tourists tend to seek out destinations that are predictably similar to that which they know while travelers are drawn to the adventure of the unknown. This class is designed for the traveler and not for the tourist. Together, we are about to embark on a journey. The itinerary is not detailed, the "hotel reservations" have not been made ahead of time, and we are not sure if we speak enough of the language to communicate with each other. We are bound to hit some potholes along the road and we may encounter transportation breakdowns on occasion. But, we are committed to an adventure.

Four months ago we invited you to join us on this journey. You accepted by becoming a student teacher in this particular program. We have all struggled together to make sense out of confounding concepts such as portfolios, concrete-connecting-abstract levels of math, whole language, concept attainment and generalizations, pro-active classroom management and how best to teach students who are not yet proficient in English. We will now endeavor to understand sequenced integration, threaded integration, theme and big idea, while incorporating science and social studies into our teaching repertoire. While many of the "answers" may still elude us at the end of our journey together, that we have grappled with such pedagogical constructs will be a significant accomplishment.

We are all to be commended for having committed to this grand adventure. The problems we will encounter are to be expected when pioneering new territories. Our timelines have not been

tried and tested, our directions will not always be as clear as we would wish, and we will have to make some hard choices about what to delete in order to accomplish the integration we seek to realize. On the other hand, we will get to experience a place that few have visited. We will have had the thrill of discovering aspects about our work which we otherwise would not know existed. We will have participated in something very special. And we will do it together. Now we go forward, hopefully to become a bit wiser, our lives enriched for having dared to risk the unknown.

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